

What is claimed is:

1. A rolling-contact bearing containing solid lubricant therein; comprising an inside rotating member having a guideway area made thereon with a first raceway, an outside rotating member rotary relatively to the inside rotating member and having a second raceway opposing to the first raceway, and a cage with rollers spaced at a preselected interval around the cage to roll through a race defined between the first raceway on the inside rotating member and the second raceway on the outside rotating member; wherein the cage with the rollers is formed together with solid lubricant to lubricate the rollers running through the race into a complete unitary molding with using a mold, the rollers being kept exposed partially at their circular rolling-surfaces out of an inside circular surface of the complete unitary molding; and wherein the complete unitary molding is assembled into the race of the bearing.

2. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 1, wherein the inside rotating member is a stud having a flange integral with any one of axially opposite ends of the guideway area and a rod integrally extending from another of the axially opposite ends of the

guideway area and made less in diameter than the guideway area, and a circular plate fits over the rod of the stud.

3. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 2, wherein the outside rotating member is an outer ring recessed at axially opposite ends thereof to form setbacks, one to each end, thereby providing an intermediate area midway between the setbacks, on which is made the second raceway, and wherein the flange on the stud fits in any one of the setbacks while the circular plate fits in another setback.

4. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 3, wherein thrust rings made of wear-resistant plastics such as polyetheretherketone and so on fit in the setbacks recessed in the outer ring on to the flange and the circular plate, respectively, and wherein the thrust rings are placed along an outer circumference of axially opposite ends of the complete unitary molding.

5. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 3, wherein seal members of synthetic resin or synthetic rubber are placed in a way coming into abutment against outer circumferences of the flange and the circular

plate, one to each outer circumference.

6. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 2, wherein the stud is made therein an oil port open at a plain end thereof and communicating with an oil passage, which extends to an radially outside circular surface around the guideway member, and also communicating with another oil passage, which extends to an outside circular surface around the rod.

7. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 3, wherein the outer ring incorporated in any counterpart has an outside surface of spherical configuration.

8. A rolling-contact bearing containing solid lubricant therein, constructed as defined in any one of claims 1 and 2; wherein the outside rotating member is an outer ring having flanges at axially opposite ends thereof and a circular area lying midway between the flanges, the cage with the rollers being embraced inside the circular area of the outer ring the cage; wherein the outer ring, the cage with the rollers are all formed together with solid lubricant by use of the mold into a complete unitary molding; and wherein the complete unitary molding including the outer ring therein fits over the inside rotating member.

9. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 8, wherein the outer ring has an oil groove made circumferentially of a circular outside surface thereof, and an oil hole extended from the circular outside surface to a circular inside surface of the outer ring.

10. A rolling-contact bearing containing solid lubricant therein, constructed as defined in any one of claims 1 and 8, wherein the mold is comprised of an outside mold having an inside circular surface, an inside mold disposed inside the outside mold and made up of a radially thicker area and a radially reduced area less than the thicker area, and an intermediate mold disposed to fit closely over an outside circular surface around the reduced area of the inside mold, defining a circular clearance over the inside circular surface of the outside mold, the intermediate mold being made of a substance that is larger in thermal expansion than other substance for the outside and inside molds, and wherein the cage with the rollers spaced at a preselected interval around the cage is placed together with the solid lubricant and formed into a complete unitary molding with the help of a difference in thermal expansion between the

intermediate mold and the outside mold.

11. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 10, wherein the cage with the rollers spaced at regular intervals is first placed into the clearance between the intermediate mold and the outside mold and the solid lubricant is poured into the clearance and around the cage and the rollers to fill the clearance as long as to reach everywhere including gaps left between the cage and every roller, then the mold is heated to get the intermediate mold to expand by heat greater than the outside mold, whereby the solid lubricant is pressed against the rollers around the cage with pressure developed by the difference in thermal expansion between the intermediate mold and the outside mold, followed by solidifying at ambient temperature into the complete unitary molding.

12. A rolling-contact bearing containing solid lubricant therein, constructed as defined in claim 11, wherein the solid lubricant in solution state is poured into the clearance and around the cage and the rollers to fill the clearance as long as to reach everywhere including gaps left between the cage and every roller, followed by solidifying at ambient temperature.

13. A rolling-contact bearing containing solid

lubricant therein, constructed as defined in claim 11,
wherein the outside rotating member of the outer ring
having flanges at axially opposing ends thereof is
placed in the clearance between the intermediate mold
and the outside mold, and the cage with the rollers
spaced at regular intervals is surrounded with the
inside circular surface of the inside the outer ring.